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Abstract:

Among the vast array of imaging techniques to evaluate the Urinary System, MRU and Triple bolus CTU are the techniques, by which visualization of renal parenchymal, excretory, and vascular contrast-enhancement phases are more achievable. In CT urographic technique, called Triple-Bolus Multi detector CT Urography the entire urinary tract in one acquisition is obtained, and also providing intravenous urogram like (IVU) images in a coronal reformatted view. The MR urographic techniques used to display the urinary tract can be divided into two categories: (a) T2-weighted MR urography, or MR hydrography, and (b) excretory MR urography or T1-weighted MR urography. When findings of both techniques are compared, CTU showed slightly better intrarenal cavity visualization but consistently poorer visualization towards the distal ureters due to the hydration and diuresis protocol used, while MRU achieved better overall excretory phase visualization than CTU.

This study as a descriptive investigation is to make a comparison between Triple-Bolus Multidetector CT Urography with MRU Technique in Urinary Tract to illustrate their advantages and disadvantages in terms of improved image quality and patients dose absorption.

Keyword: Triple-Bolus; Multidetector CT; T2-Weighted MR Urography; T1-Weighted MR Urography; MR Hydrography; Excretory MR Urography

• 1290

DESIGNING A NEW BITE BLOCK FOR COMPENSATION TONGUE SHADOW ERROR IN PANORAMIC RADIOGRAPHY

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Abstract:

Introduction: the most common positioning error in panoramic radiography is "Tongue Shadow Error", due to the patient not raising the tongue against the palate, so it results in radiolucent area over the roots of the maxillary teeth. Unfortunately, it can interfere with diagnosis. Up to now, many solutions have suggested, which were more related to instructing the patient, like "TRM". But those methods couldn't afford it completely. Our study suggests a new design bite block for compensation this error.

Material and Method: After investigations on 3D pattern and anatomical structure of palate in individual with different ages, groups, sex, and measurements, finally the new bite block out of special radiolucent plastic, was built by the 3D printers. 15 volunteers for each Control and study group was selected. A panoramic radiography (OPG) was taken for all of them. Then images collected and the dark area of airspace was measured in each image by an already approved method in other literatures. Wilcoxon Mann-Whitney U-Test was used.

Results: images taken with the new bite block showed less errors. The mean value of dark space distance in the study group was 1.7 mm in midsagittal while it was 5.2 mm in control group. Statistical evaluation showed significant difference between two groups ($P < .0001$).

Conclusion: this study demonstrates that the new design bite block can reduce the "tongue shadow error". Also, it's easy to use and comfortable for pediatrics and old people as they implied after test.

• 1291

WHAT IS THE EOS IMAGING?

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Abstract:

EOS is a medical imaging system whose aim is to provide frontal and lateral radiography pictures. EOS imaging system is a novel technique that contains two parts; EOS that creates the whole body image in a standing position and two-dimensional form using low-dose, and Ster-EOS that converts the data to three-dimensional (3D) in standing position. This system consists of two X-ray tubes and two detectors that move up to down in a vertical chamber and takes patients pictures from Frontal and Lateral positions. EOS is a biplane X-ray imaging system manufactured by EOS Imaging. It uses slot-scanning technology to produce a high-quality image with

less irradiation than standard imaging techniques.

In this approach we explain the benefit and application of EOS in medicine.

• 1292

CABAGE AND PROTECTION AGAINST IONIZING RADIATION

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Abstract·

Althougl application of ionizing radiation is useful and sc metimes unique in some fields, but their potential risks were discovered shortly after the discovery of radioactive materials in more than a century ago. Various methods have been used to reduce the risks or even cure them; one of these methods is application of natural foods. Brassica oleracea is one of delicious foods capable of protecting against ionizing radiation by a unique mechanism, ATM stimulation leads to DDR response without any damages to DNA. Oxidative stress in damaged tissue can result in improvement and ATM plays the role of an antioxidant acting as oxidation sensor and activate oxidation process. Finally, Brassica oleracea is an effective and useful material for protecting against undesirable radiation in radiotherapy patients.

• 1293

INVESTIGATION OF RESPECT TO PATIENTS' RIGHT IN RADIOLOGY DEPARTMENT OF EDUCATIONAL-TREATMENT HOSPITAL OF COUNTRIES

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Abstract:

Introduction: health care services must be provided fairly and based on respect to patients' right. Patients' rights are the responsibilities of a medical center toward the patient, and their observance is one of the main principles of clinical standards which results in patients' satisfaction and is among the major indicators of quality assessments of healthcare services. The aim of this study is to investigate the level of respect to patients' rights in radiology department of medical and educational hospitals of country.

Method: in this reviewing library research, all the studies on patients' right from 2011 to 2016 were examined by using keywords such as "patients' right", "respect to patients' right" and "awareness about patients' right" in Google scholar, SID, Iranmedex and Magiran databases.

Findings: patients' right bill was developed in 2002 based on 5 major axes in Iran and declared by health vice of ministry of health, treatment and medical education. 5 axes of this bill are: right to received desirable service, right to received information, right of free choice and decision of patient, privacy right of patient, confidentiality right and finally, the right to access to efficient system of complaints tracking. According to studies, meeting each of these axes in clinic an

Para clinic departments of educational and medical hospitals with average and standard deviation of 15.5 ± 42.18 and in radiology department by average and standard deviation of 6.4 ± 32.5 are evaluated at medium level. Also, among the investigated fields, in both radiology department and the rest of hospital sections, highest patient satisfaction were related to first axis with %17.4 "excellent" scores and %5.7 "good" score and least patient satisfaction in radiology section was associated with fifth axis with %33 and no "excellent" score. While the least satisfaction in the other hospital departments was for the third axis with %14.7 "good" score.

Conclusion: overall, the level of patients' satisfaction in terms of respect to patients' right in radiology department of educational and medical hospitals was medium and these standards are not completely met; therefore it is proposed to take necessary measures to resolve the problems in this regard.

Keywords:

Patients' Right Bill; Radiology Department; Satisfaction; Patients'right